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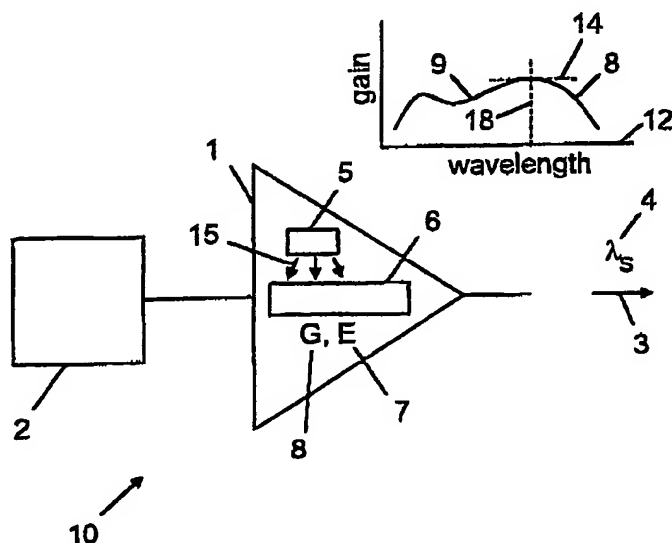
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(54) Title: LD PUMPED FIBRE AMPLIFIER WITH SECOND RESONATOR OR INPUT SIGNAL FOR GAIN LIMITATION



(57) Abstract: Apparatus (10) for  
providing optical radiation (3) having  
a signal wavelength  $\lambda_s$  (4), which  
apparatus (10) comprises at least one  
pump (5) for providing pump radiation  
(15), a gain medium (6), and energy  
limiting means (2), in which the pump  
radiation (15) acts on the gain medium  
(6) to provide stored energy (7) and  
gain (8) for optical amplification,  
characterised in that the gain (8) has a  
maximum gain (14) at a wavelength (18)  
at which the maximum gain occurs (14),  
and the energy limiting means (2) limits  
the maximum gain (14) and the amount  
of stored energy (7) that is able to be  
stored to values below those at which the  
stored energy (7) will cause damage to  
the apparatus (10).